

# **HAZWRAP**

**HAZARDOUS WASTE REMEDIAL ACTIONS PROGRAM**

**INSTALLATION RESTORATION PROGRAM**

## **DECISION DOCUMENT**

**SITE SS-003**  
**FUEL OIL SPILL (BUILDING 205)**

**PLATTSBURGH AIR FORCE BASE**  
**PLATTSBURGH, NEW YORK**

**FINAL**

**MAY 1990**

Oak Ridge National Laboratory  
Oak Ridge, Tennessee 37831

operated by

Martin Marietta Energy Systems, Inc.  
for the  
U.S. DEPARTMENT OF ENERGY

202813



**INSTALLATION RESTORATION PROGRAM  
DECISION DOCUMENT**

**SITE SS-003  
FUEL OIL SPILL (BUILDING 205)**

**PLATTSBURGH AIR FORCE BASE  
PLATTSBURGH, NEW YORK**

**FINAL**

**Prepared for:**

**HAZWRAP SUPPORT CONTRACTOR OFFICE  
OAK RIDGE NATIONAL LABORATORY  
OAK RIDGE, TENNESSEE**

**Operated by:**

**MARTIN MARIETTA ENERGY SYSTEMS, INC.  
FOR THE  
U.S. DEPARTMENT OF ENERGY  
UNDER CONTRACT 12B-97386C**

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Job No. 5329-36**

**MAY 1990**

TECHNICAL DOCUMENT TO SUPPORT NO FURTHER ACTION

RECORD OF DECISION

SITE NAME AND LOCATION

Installation Restoration Program Site  
Heating Oil Spill (Building 205), Site SS-003  
Plattsburgh AFB, New York

STATEMENT OF BASIS

This decision is based on the results of Installation Restoration Program (IRP) Phase I Records Search and Site Inspection studies conducted at Plattsburgh AFB, with reports dated April 1985 and July 1989, respectively.

DESCRIPTION OF THE SELECTED REMEDY

Based on the current conditions at IRP Site SS-003, it has been determined that no significant risk or threat to public health or the environment exists. Therefore, it has been determined that no further action under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) is required.

DECLARATION

This decision document represents the selected action for this site developed in accordance with CERCLA, as amended by the Superfund Amendment and Reauthorization Act of 1986 (SARA), and the National Contingency Plan (NCP). It has been determined that the selected remedy of no further action is protective of human health and the environment, attains Federal and State requirements that are applicable or relevant and appropriate, and is cost-effective. The statutory preference for further treatment is not satisfied because treatment was found to be impracticable. Contaminant levels at the site were determined to present no significant threat to human health or the environment; thus, no treatment is necessary.



STEVEN G. JOSEPH  
Colonel, USAF  
Commander, 380th Combat Support Group

20 May 90  
Date

  
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INSTALLATION RESTORATION PROGRAM  
REMEDIAL INVESTIGATION/FEASIBILITY STUDY  
PLATTSBURGH AIR FORCE BASE  
PLATTSBURGH, NEW YORK

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SITE SS-003 DECISION DOCUMENT  
PLATTSBURGH AIR FORCE BASE

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SITE SS-003 DECISION DOCUMENT  
PLATTSBURGH AIR FORCE BASE

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## 1.0 INTRODUCTION

This Decision Document (1) describes the history of the Plattsburgh Air Force Base (AFB) fuel oil spill at Building 205 (Site SS-003) (2) presents the rationale for and results of field investigations at this site, (3) presents results of the public health and ecological risk assessments for the site, and (4) explains why no further action is recommended for this site. Site SS-003 was identified initially in the Phase I Records Search, a preliminary assessment of Plattsburgh AFB conducted by Radian Corporation (Radian) (Radian Corporation, 1985). Site SS-003 was further investigated by E.C. Jordan Co. (Jordan) during the Site Inspection (SI) Study (E.C. Jordan Co., 1989). On the basis of those results, no further action is recommended for this site.

Site SS-003 was formerly designated Site SP-2. Site SP-2 was officially changed to SS-003 because IRP site designations were restructured for programming and tracking requirements.

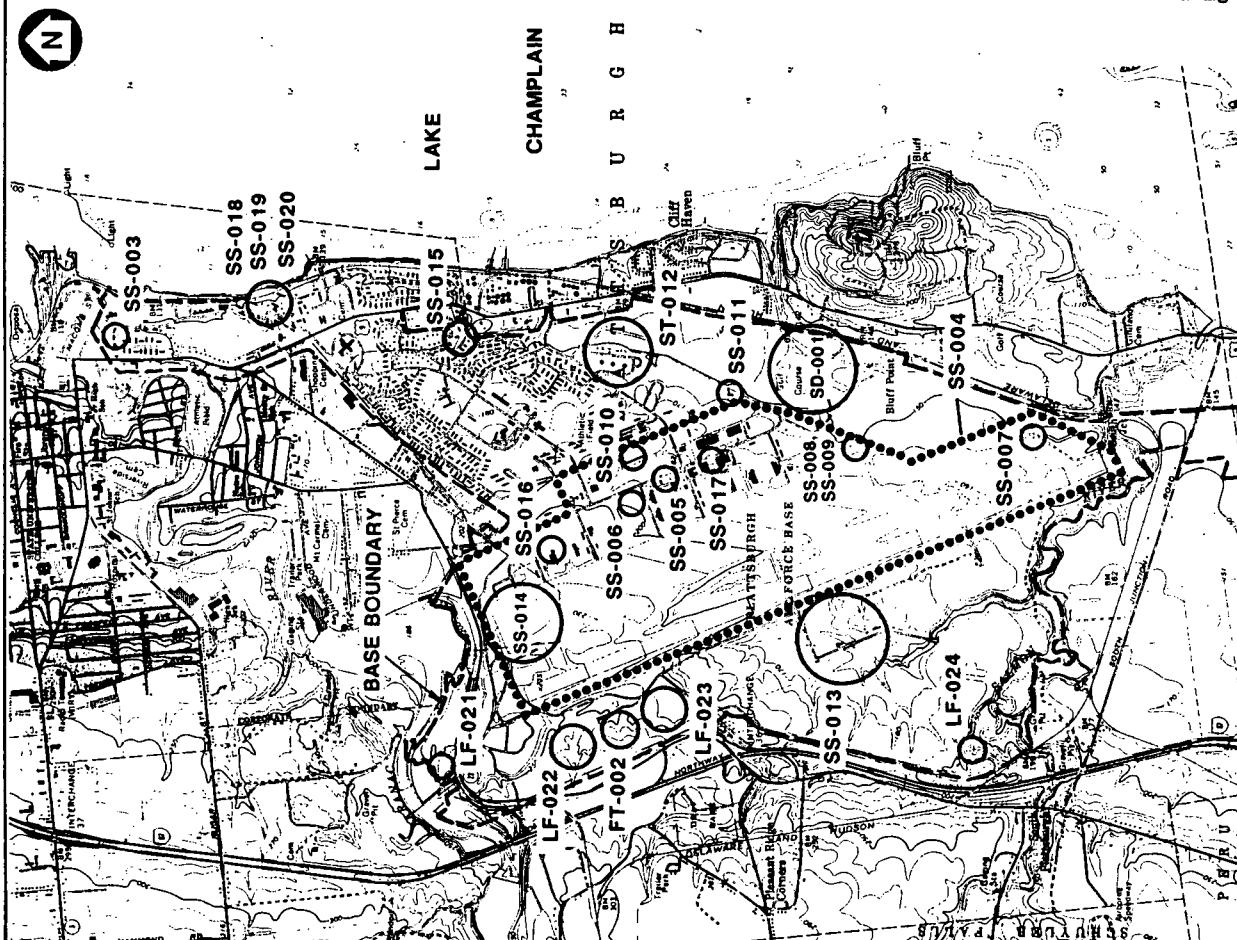
## 2.0 SITE DESCRIPTION AND HISTORY

Site SS-003 is located in the "old base housing area" at the northern end of the base (Figures 1 and 2). As part of the former Phase I Installation Restoration Program (IRP) studies, Radian conducted a records search regarding Site SS-003. Appendix A compares former IRP terminology and the currently used CERCLA terminology. Radian's findings are summarized in the following paragraphs.

In 1982, a leak was detected in a No. 2 fuel oil underground storage tank (UST) located next to Building 205 (the fuel oil was used to heat Building 205). Initially, fuel oil was found by a fisherman at a city storm sewer outfall discharging to the Saranac River. The storm sewer outfall was traced back to the Plattsburgh AFB storm sewer system and subsequently back to the leaking fuel oil UST. Fuel oil leaked to an existing underground tile drain designed to regulate the groundwater level in the area. The tile drain discharges to a base storm sewer, which connects to the city storm sewer system and discharges to the Saranac River.

Base personnel estimated that approximately 1,000 gallons of fuel oil leaked from the UST before the problem was discovered. According to Plattsburgh AFB personnel, the 550-gallon UST constructed of fiberglass-reinforced plastic was installed in 1979 at approximately 2 feet below ground surface. In 1982, the leaking UST was replaced with a steel UST of the same capacity buried at approximately the same depth. The leaking UST was removed along with several cubic feet of surrounding soil. Absorbent pads and booms were placed in the drainage path to collect fuel oil draining from the UST. These were maintained until material was no longer observed on the surface of the water.

Because a leak of potentially hazardous material was discovered, the site received a Hazard Assessment Rating Methodology score of 54. Based on its Phase I report, Radian recommended that Phase II studies (i.e., Confirmation/Quantification) be undertaken at the site.



### 3.0 SITE INSPECTION RESULTS

Jordan's Site Inspection Study for Site SS-003 investigated potential No. 2 fuel-oil-related soil contamination near the tank and tile drainfield. Exploration and sampling techniques included the following:

- o completion of a soil gas survey to determine the presence or absence of volatile organic compounds (VOCs) in the soils
- o collection of one surface water sample from the city storm sewer discharge at the Saranac River
- o completion of two soil borings to investigate the potential for residual fuel oil contamination

Soil gas samples were analyzed on-site with a portable gas chromatograph. Surface water and soil samples were analyzed in the laboratory. Field activities investigating Site SS-003 and results of laboratory analyses are summarized in Section 3.1 through Section 3.3. A summary of the data validation is presented in Section 3.4.

Limited information exists for this site concerning geology and hydrogeology. Explorations at Site SS-003 consisted of two hand-auger borings to 6 feet in depth. Soils encountered consisted of sand, silty sand, and clay. Groundwater is anticipated to be shallow; less than 10 feet below ground surface based on local hydrogeological information. Groundwater was not encountered in either boring during exploration activities.

#### 3.1 Soil Gas Survey

On October 16, 1987, a soil gas survey was conducted west of Building 205 at Site SS-003 (see Figure 2). A soil gas survey, primarily used to locate soil sampling points, provides unconfirmed volatile organic results by using head space readings as indicators of soil contamination. Five probes to depths of 5 feet below ground surface were completed. Soil gas samples were analyzed for benzene, toluene, xylene, trichloroethane, trichloroethylene, and perchloroethylene. Trace concentrations of benzene, toluene, and xylene all fuel-related compounds, were detected in three of the six samples (including one duplicate). Trichloroethane was not detected in any of the samples. Low levels of trichloroethylene were detected in all six samples and low levels of perchloroethylene were detected in five of the six samples. Results of the soil gas survey are in Appendix B.

#### 3.2 Surface Water

On December 9, 1987, one surface water sample (SW-1) was collected at the city storm sewer outfall on the Saranac River (Figure 3). The surface water sampling location was selected because the local drainage system represents the likely migration pathway for residual contaminants. As stated in Section 2.0, the tile drain was installed to regulate the groundwater level in the area. The tile drain discharges to the base storm sewer, and subsequently to the city storm sewer which outfalls to the Saranac River.

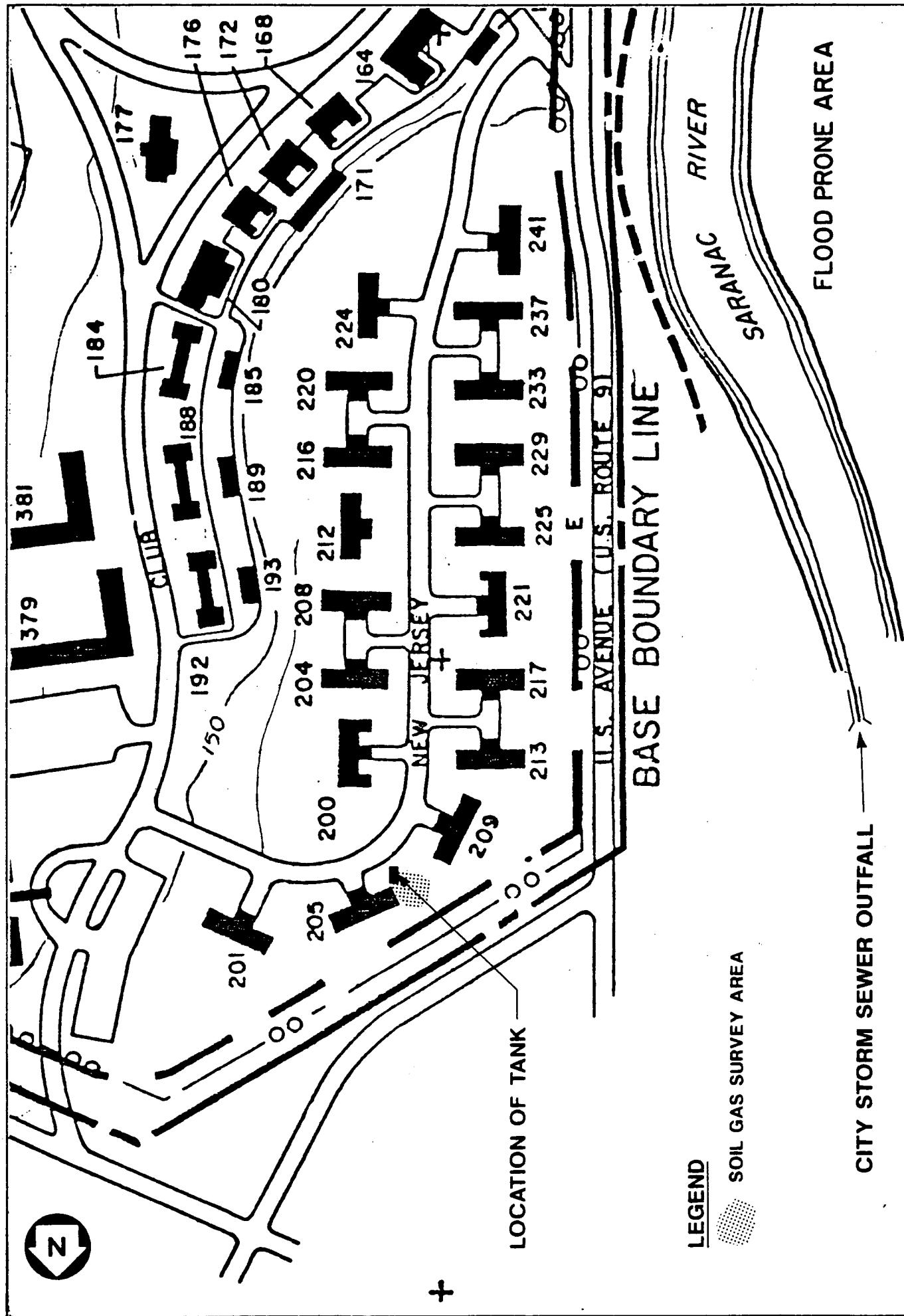


FIGURE 2  
SITE SS-003 SOIL GAS SURVEY  
PLATTSBURGH AFB  
PLATTSBURGH, NEW YORK  
E.C.JORDANCO

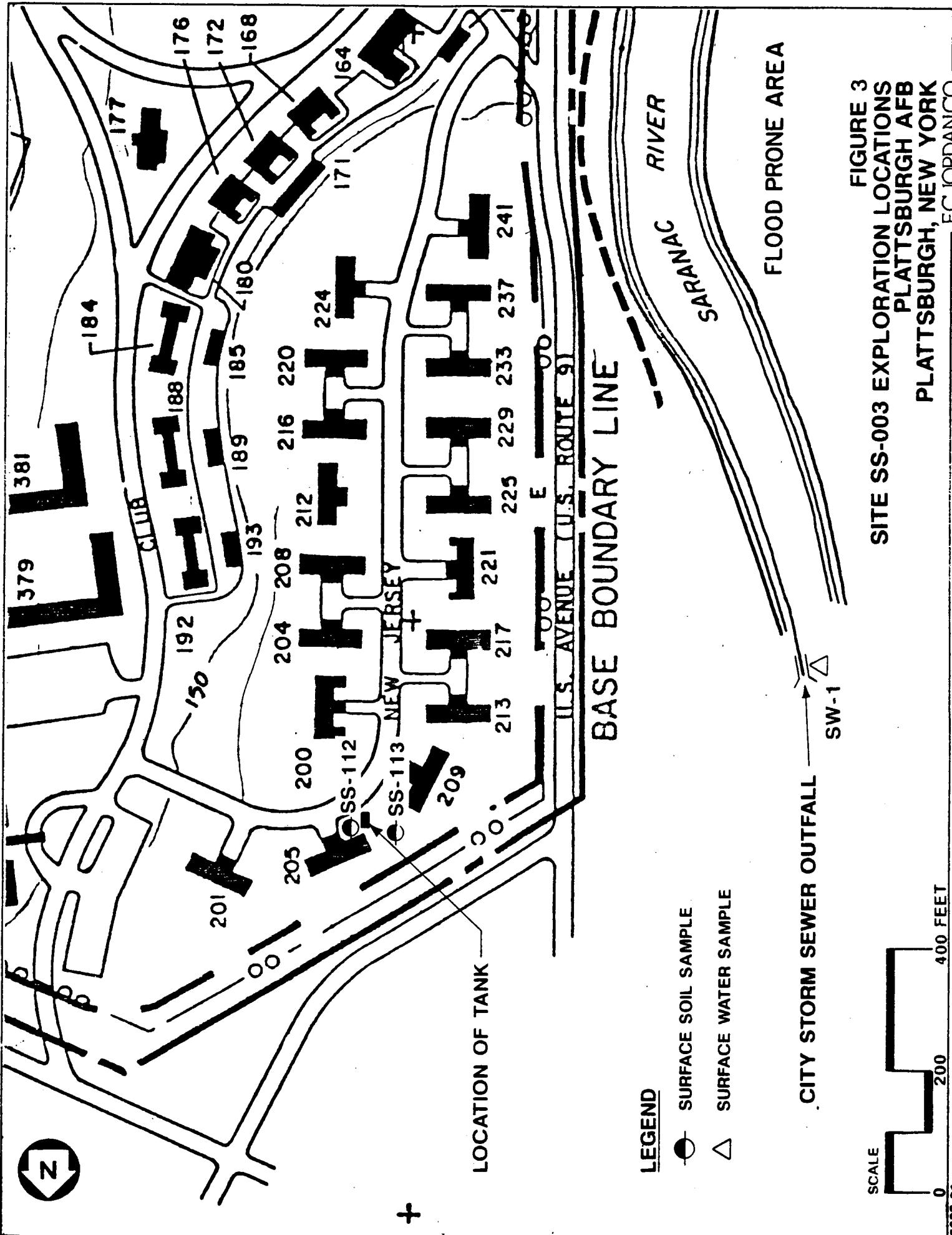


FIGURE 3  
SITE SS-003 EXPLORATION LOCATIONS  
PLATTSBURGH AFB  
PLATTSBURGH, NEW YORK  
E.C.JORDANCO

The surface water sampling results appear in summary data Table 1. The sample was analyzed for VOCs and petroleum hydrocarbons (PHCs); neither were detected. The VOC and PHC analyses were performed in accordance with Contract Laboratory Program (CLP) Caucus Organic Protocol (COP), and U.S. Environmental Protection Agency (USEPA) Method 418.1.

### 3.3 Soil

On November 10, 1987, two hand-auger soil borings, SS-112 (located within the excavation area of the former tank) and SS-113 (located within the downgradient soil gas survey area between the former UST location and the storm sewer outfall), were drilled west of Building 205 to a depth of 6 feet (see Figure 3). Eighteen soil samples were collected (including six duplicate samples). Selected samples were analyzed for some or all of the following compounds: VOCs, semivolatile organic compounds (SVOCs), and PHCs. VOC and SVOC analyses were performed in accordance with CLP-COP. PHC analyses were performed using USEPA Method 418.1.

Results of the VOC, SVOC, and PHC analyses for SS-112 are presented in summary data Table 2. VOCs were not detected at 1-, 2-, and 3-foot depths. SVOC analyses were not requested for the 1-, 2-, or 3-foot samples. PHCs were not detected in the 1- and 2-foot samples. The 3-foot sample was taken in duplicate; low levels of PHCs (82 milligrams per kilogram [mg/kg]) were detected in the first sample; PHCs were not analyzed for in the duplicate sample. The 4-foot sample was collected in duplicate and analyzed for VOCs and SVOCs. Acetone was estimated (26 µg/kg) and not detected in the duplicate. Xylene was detected in the sample (300 µg/kg) and estimated in the duplicate (470 µg/kg). Ethylbenzene was detected in the sample (150 µg/kg) and estimated in the duplicate (100 µg/kg). SVOC analyses in the first 4-foot sample estimated elevated concentrations of phenanthrene (8,000 µg/kg) and 2-methylnaphthalene (18,000 µg/kg). Duplicate samples collected at 5 feet were analyzed for VOCs; results were consistent. Ethylbenzene (estimated at 200 and 260 µg/kg), xylenes (estimated at 480 and 610 µg/kg), and a low concentration of toluene (estimated at 33 µg/kg in the duplicate sample only) were detected. The 5-foot sample also contained elevated concentrations of PHCs (6,900 mg/kg). One sample, collected at 6 feet was analyzed for VOCs and PHCs. VOCs were not detected and PHCs were detected at 160 mg/kg.

Selected samples from SS-113 were analyzed for VOCs and PHCs (summary data Table 2). 2-Butanone (27 µg/kg) was estimated in the 1-foot sample; low levels of PHCs were found at 1 and 2 feet (25 and 33 mg/kg, respectively).

### 3.4 Data Validation Summary

The following is a review of the laboratory sample and quality control data associated with samples collected from site SS-003 on November 10, 1987. One surface water sample (JSWP-2X01) was collected at the storm sewer outfall on the Saranac River. The sample was analyzed for VOCs and PHCs. Two soil borings were completed west of building 205 to a depth of 6 feet, and 12 soil samples and 6 duplicate samples (S2XSS11201, S2XSS11202, S2XSS11203, S2DSS11203, S2XSS11204, S2DSS11204, S2XSS11205, S2DSS11205, S2XSS11206, S2XSS11301,

S2XSS11302, S2DSS11302, S2XSS11303, S2XSS11304, S2DSS11304, S2XSS11305, S2DSS11305, S2XSS11306) were collected. Samples were analyzed for some or all of the following parameters: VOCs, SVOCs, and PHCs.

3.4.1 Quality Assurance. The sample data were reviewed and evaluated in accordance with USEPA Region I "Laboratory Data Validation; Functional Guidelines for Evaluating Inorganic and Organic Analyses", 1988. Laboratory and field blanks, laboratory and field duplicate analyses, surrogate recoveries, calibrations, field notes, chain-of-custody documentation, and analytical sequences were reviewed. The data were also reviewed for outliers and technical credibility versus the sample setting.

3.4.2 Analytical Analyses. The analytical analyses for VOCs, SVOCs, and PHCs are reviewed in this section.

#### Volatile Organics

The following samples were evaluated for method blank contamination for acetone and methylene chloride, and the corrected results were all non-detects: S2XSS11201, S2XSS11202, S2XSS11203, S2DSS11203, S2DSS11204, S2XSS11204, S2XSS11205, S2DSS11205, S2XSS11206, S2XSS11301, S2XSS11302, S2DSS11302, S2XSS11303, S2XSS11304, S2DSS11304, S2XSS11305, S2DSS11305, S2XSS11306.

Sample S2DSS11204 was blank corrected for chloroform; the corrected result was non-detect.

The 2-butanone results were all reported by the laboratory as non-detects but were rejected for the following samples because the calibration response factor was below the acceptance limit: S2XSS11201, S2XSS11202, S2XSS11203, S2DSS11203, S2DSS11204, S2XSS11204, S2XSS11205, S2DSS11205, S2XSS11206, S2XSS11302, S2DSS11302, S2XSS11303, S2XSS11304, S2DSS11304, S2XSS11305, S2DSS11305, S2XSS11306.

The positive 2-butanone result for S2XSS11301 was estimated because the calibration response factor was below the acceptance limits.

The sample result for S2DSS11204 was corrected because of a reporting error. The result reported for chlorobenzene in the SI Report (E.C. Jordan Co., 1989) was actually ethylbenzene, and this change is reflected in the data tables presented within this report. The sample was also analyzed outside of hold time, and the entire volatile fraction is reported as estimated.

Sample S2DSS11205 had high surrogate recovery for toluene-8; the reported values for ethylbenzene and total xylenes are estimated.

Sample S2XSS11205 total xylene result is reported as estimated since the reported value exceeded the instrument's calibration range.

### Semivolatile Organics

Sample S2XSS11204 was extracted beyond the hold time; therefore all results are reported as estimated for this fraction.

### Petroleum Hydrocarbons

PHC results were not validated due to insufficient supporting documentation.

## 4.0 PUBLIC HEALTH AND ECOLOGICAL RISK ASSESSMENTS

This section presents results of the public health and ecological risk assessments based on site history, current usage, and field investigations.

### 4.1 Public Health Risk Assessment

PHCs were the only site-related contaminants detected in the surface soil at site SS-003. As a source of exposure to humans, soil contaminants are generally a concern only to depths of 1 foot. Site SS-003 located in the "old base housing area", is easily accessible to children, who could be exposed to site-related contaminants from direct contact with and/or ingestion of soil during play activities. However, because the levels of PHCs detected in surface soil were low (25 mg/kg in sample SS-113), and the site size is small (i.e., less than 100 square feet), the risk assessment found that exposures and potential health risks are negligible. Although fuel oil was discharged to the Saranac River via the storm sewer during the spill, no site-related contaminants were detected in surface water near the outfall. Therefore, exposure via direct contact with and/or ingestion of surface water is not a concern.

### 4.2 Ecological Risk Assessment

Contamination at this site does not appear to be adversely affecting the natural environment. PHCs were the only site-related contaminants detected in the surface soil at site SS-003 (25 mg/kg in SS-113). Risk-based standards have not been developed for PHCs, however, fuel-related compounds are not known to bioconcentrate in the terrestrial food chain. The site is located in a developed area providing limited habitat for wildlife, indicating that species diversity and population densities are low, which further reduces the likelihood of significant exposure.

Migration of fuel oil from the UST to the storm sewer and subsequently into the Saranac River could have resulted in toxic effects to aquatic biota. However, no VOCs or PHCs were detected in a water sample collected from the storm sewer outfall indicating that migration of contaminants from the site to the Saranac River no longer occurs. Therefore, the site does not appear to be adversely affecting aquatic biota in the Saranac River.

### 4.3 Conclusions

Based on the risk assessment of the low concentrations of PHCs detected at Site SS-003 and the relatively small size of the site, potential public health

risks associated with exposure at the site are negligible. Additionally, because the site is located in a developed area providing minimal wildlife habitat, exposure is unlikely. Also, the chemicals reported are not prone to bioconcentration in the terrestrial food chain. Because there is no likely route of exposure for terrestrial wildlife, ecological risks due to contamination are minimal or nonexistent.

#### 5.0 REMEDIAL ALTERNATIVES

Because results of the public health and ecological risk assessments indicate that concentrations of fuel-related contaminants detected in Site SS-003 surface soils pose negligible risks, remediation of this site is unwarranted under present conditions. The remedial alternative recommended for this site is no further action. In the event of a future site activity requiring excavation of subsurface soil (e.g., removal or replacement of the existing UST) site conditions should be reevaluated to address potential risks such as worker exposure to contaminated subsurface soil.

#### 6.0 RATIONALE FOR NO FURTHER ACTION

The spill source at Site SS-003 has been removed. Based on results from the SI study and the public health and ecological risk assessments it is concluded that there is currently no significant threat to public health or environment at Site SS-003. On the basis of these findings, it is recommended that this site be removed from further consideration in the IRP process.

TABLE 1

ANALYTE	UNITS: ug/L	CRRL
Chloromethane	10	
Bromomethane	10	
Vinyl Chloride	10	
Chloroethane	10	
Methylene Chloride	5	
Acetone	10	
Carbon Disulfide	5	
1,1-Dichloroethene	5	
1,1-Dichloroethane	5	
1,2-Dichloroethene (total)	5	
Chloroform	5	
1,2-Dichloroethane	5	
2-Butanone	10	R
1,1,1-Trichloroethane	5	
Carbon Tetrachloride	5	
Vinyl Acetate	10	
Bromodichloromethane	5	
1,2-Dichloropropane	5	
Cis-1,3-Dichloropropene	5	
Trichloroethene	5	
Dibromochloromethane	5	
1,1,2-Trichloroethane	5	
Benzene	5	
Trans-1,3-Dichloropropene	5	
Bromoform	5	
4-Methyl-2-Pentanone	10	
2-Hexanone	10	
Tetrachloroethene	5	
1,1,2,2-Tetrachloroethane	5	
Toluene	5	
Chlorobenzene	5	
Ethy benzene	5	
Styrene	5	
Xylene (Total)	5	

===== Dilution Factor: 1  
 Associated Method Blank: CB871214C13

PROJECT: Pittsburgh

SURFACE WATER SAMPLE ANALYSIS- SS-003 (SP-2) Fuel Oil Spill (Building 205)

19-Mar-90

TABLE 1, cont.

SAMPLE ID:	SW-1
SAMPLE LOCATION:	JMWSP 2X01
LAB NUMBER:	171297
DATE SAMPLED:	12/09/87
DATE ANALYZED:	12/17/87
ANALYTE	
UNITS: mg/L	DL
Total Petroleum Hydrocarbons	1

TABLE 2

PROJECT: Pittsburgh

## **SOIL BORING SAMPLE ANALYSIS - SS-003 (SP-2) Final Oil Spill (Building 205)**

19-Mar-90

TABLE 2, cont.

## **SOIL BORING SAMPLE ANALYSIS - SS-003 (SP-2) FUEL OIL SPILL (Building 205)**

10-M28-00

TABLE 2, cont.

ANALYTE	UNITS: ug/kg	CRL	
Chloroethane	10		
Bromomethane	10		
Vinyl Chloride	10		
Chloroethane	10		
Methylene Chloride	5		
Acetone	10		
Carbon Disulfide	5		
1,1-Dichloroethene	5		
1,1-Dichloroethane	5		
1,2-Dichloroethene (total)	5		
Chloroform	5		
1,2-Dichloroethane	5		
2-Butanone	10	R	
1,1,1-Trichloroethane	5		
Carbon Tetrachloride	5		
Vinyl Acetate	10		
Bromodichloromethane	5		
1,2-Dichloropropane	5		
Cis-1,3-Dichloropropene	5		
Trichloroethene	5		
Dibromochloromethane	5		
1,1,2-Trichloroethane	5		
Benzene	5		
Trans-1,3-Dichloropropene	5		
Bromoform	5		
4-Methyl-2-Pentanone	10		
2-Hexanone	10		
Tetrachloroethene	5		
1,1,2,2-Tetrachloroethane	5		
Toluene	5		
Chlorobenzene	5		
Ethylbenzene	5		
Styrene	5		
Xylene (Total)	5		
			=====
Dilution Factor:	1		1
Percent Solids:	77		75
Associated Method Blank:	G8871121C10		G8871121C10

## PROJECT: Pittsburgh

## SOIL BORING SAMPLE ANALYSIS - SS-003 (SP-2) Fuel Oil Spill (Building 205)

TABLE 2, cont.

19-Mar-90

ANALYTE	UNITS: ug/kg	CRAI
Phenol	330	-
bis(2-Chloroethyl)ether	330	-
2-Chlorophenol	330	-
1,3-Dichlorobenzene	330	-
1,4-Dichlorobenzene	330	-
Benzyl alcohol	330	-
1,2-Dichlorobenzene	330	-
2-Methylphenol	330	-
bis(2-Chloroisopropyl)ether	330	-
4-Methylphenol	330	-
N-Nitroso-di-n-propylamine	330	-
Hexachloro	330	-
Nitrobenzene	330	-
Isophorone	330	-
2-Nitrophenol	330	-
2,4-Dimethylphenol	330	-
Benzoic acid	1600	-
bis(2-Chloroethoxy)methane	330	-
2,4-Dichlorophenol	330	-
1,2,4-Trichlorobenzene	330	-
Naphthalene	330	-
4-Chloroaniline	330	-
Heptachlorobutadiene	330	-
4-Chloro-3-Methylphenol	330	18000 J
2-Methylnaphthalene	330	-
Hexachlorocyclopentadiene	330	-
2,4,6-Trichlorophenol	330	-
2,4,5-Trichlorophenol	1600	-
2-Chloronaphthalene	330	-
2-Nitroaniline	1600	-
Dimethylphthalate	330	-
Acenaphthylene	330	-
2,6-Dinitrotoluene	330	-

## PROJECT: Pittsburgh

## SOIL BORING SAMPLE ANALYSIS - SS-003 (SP-2) Fuel Oil Spill (Building 205)

19-Mar-90

TABLE 2, cont.

ANALYTE	UNITS: ug/kg	CRQL
3-Nitroaniline	1600	-
Acenaphthene	330	-
2,4-Dinitrophenol	1600	-
4-Nitrophenol	1600	-
Dibenzofuran	330	-
2,4-Dinitrotoluene	330	-
Diethylphthalate	330	-
4-Chlorophenyl - phenylether	330	-
Fluorene	330	-
4-Nitroaniline	1600	-
4,6-Dinitro-2-methylphenol	1600	-
N-Nitrosodiphenylamine	330	-
4-Bromophenyl - phenylether	330	-
Hexachlorobenzene	330	-
Pentachlorophenol	1600	-
Phenanthrene	330	8000 J
Anthracene	330	-
Di-n-butylphthalate	330	-
Fluoranthene	330	-
Pyrene	330	-
Butylbenzylphthalate	330	-
3,3'-Dichlorobenzidine	660	-
Benzo(a)Anthracene	330	-
Chrysene	330	-
bis(2-Ethylhexyl)phthalate	330	-
Di-n-octyl phthalate	330	-
Benzo(b)Fluoranthene	330	-
Benzo(k)Fluoranthene	330	-
Benzo(a)Pyrene	330	-
Indeno(1,2,3-cd)pyrene	330	-
Dibenz(a,h)anthracene	330	-
Benzog(h,i,)perylene	330	-

=====
 Dilution Factor: 5.0  
 Percent Solids: 79

Associated Method Blank: GH066636A16

## PROJECT: Plattsburgh

TABLE 2, cont.

## SOIL BORING SAMPLE ANALYSIS - SP-2 Fuel Oil Spill (Building 205)

19-Mar-90

SAMPLE ID:	SS-112	SS-112	SS-112	SS-112	SS-112	SS-112	SS-112
S2XSS11201	S2XSS11202	S2XSS11203	S2XSS11205	S2XSS11206	S2XSS11301	S2XSS11302	S2XSS11303
164662	164664	164666	164672	164692	164704	164717	164761
LAB NUMBER:							
DEPTH (ft.):	<sup>1</sup> 2	<sup>3</sup> 2	<sup>5</sup> 11/10/87	<sup>6</sup> 11/10/87	<sup>1</sup> 11/10/87	<sup>2</sup> 11/10/87	<sup>3</sup> 11/10/87
DATE SAMPLED:	11/10/87	11/10/87	11/25/87	11/25/87	11/25/87	11/25/87	11/25/87
DATE ANALYZED:	11/25/87	11/25/87	11/25/87	11/25/87	11/25/87	11/25/87	11/25/87
ANALYTE	DL	DL	DL	DL	DL	DL	DL
UNITS: mg/kg							

Total Petroleum Hydrocarbons	25	82	6900	160	25	33
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## PROJECT: Plattsburgh

TABLE 2, cont.

## SOIL BORING SAMPLE ANALYSIS - SP-2 Fuel Oil Spill (Building 205)

19-Mar-90

SAMPLE ID:	SS-113	SS-113	SS-113
SAMPLE LOCATION:	S2XSS11304	S2XSS11305	S2XSS11306
LAB NUMBER:	164765	164768	164771
DEPTH (ft.):	4 <sup>4</sup>	5	6
DATE SAMPLED:	11/10/87	11/10/87	11/10/87
DATE ANALYZED:	11/25/87	11/25/87	11/25/87

ANALYTE	UNITS: mg/kg	DL
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Total Petroleum Hydrocarbons	25	
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GLOSSARY OF ACRONYMS AND ABBREVIATIONS

AFB	Air Force Base
CERCLA	Comprehensive Environmental Response, Compensation, and Liability
CLP	Contract Laboratory Program
COP	Caucus Organic Protocol
CRQL	Contract Required Quantitation Limit
IRP	Installation Restoration Program
mg/kg	Milligrams Per Kilogram
NCP	National Contingency Plan
PHC	Petroleum Hydrocarbon
RI/FS	Remedial Investigation/Feasibility Study
SI	Site Inspection
SVOC	Semivolatile Organic Compound
$\mu\text{g}/\text{kg}$	Micrograms Per Kilogram
$\mu\text{g}/\text{L}$	Micrograms Per Liter
USEPA	U.S. Environmental Protection Agency
UST	Underground Storage Tank
VOC	Volatile Organic Compound

## DEFINITION OF DATA QUALIFIERS

### Organic Data Qualifiers

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- J - Indicates an estimated concentration because results are either below the contract required detection level (CRQL) or quality control criteria were not met.
- JJ - Validation qualifier for concentrations below the CRQL.
- U - Indicates that compound was analyzed but not detected.
- UJ - Indicates that quantitation level was estimated because QC criteria were not met.
- B - Indicates analyte was detected in both the sample and the associated laboratory method blank.
- E - Indicates that the analyte concentration exceeded the calibration range of the GC/MS and that a re-analysis of a diluted sample is required.
- D - Indicates that sample concentration was obtained by dilution to bring result within calibration range.
- R - Indicates that data is unusable because QC criteria were not met.
- X - Laboratory-defined qualifier used to provide additional information not covered by the other qualifiers.

### Inorganic Data Qualifiers

- E - The reported concentration is estimated because of the presence of an interference.
- J - Indicates an estimated concentration because QC criteria were not met.
- R - Indicates that data is unusable because QC criteria were not met.
- M - Duplicate precision criteria were not met.
- N - Spiked sample recovery not within control limits.
- S - The reported concentration was determined by the method of standard additions.
- W - Postdigestion spike for furnace atomic adsorption analysis is outside control limits.

## DEFINITION OF DATA QUALIFIERS

- [] - Concentration reported is below CRQL.
- \* - Duplicate analysis not within control limits.
- + - Correlation coefficient for the method of standard additions was less than 0.995

### Other Notations

- NR - Analysis not requested.
  - NA - Analysis requested by not performed.
  - - Compound analyzed but not detected.
-

REFERENCES

E.C. Jordan Co., 1989. "Site Inspection Report"; Installation Restoration Program; Plattsburgh Air Force Base, New York; July 1989.

Radian Corporation, 1985. "Installation Restoration Program, Phase I: Records Search, Plattsburgh AFB, New York"; U.S. Air Force; HQ SAC/DEPVQ; Offutt AFB, Nebraska; April 1985.

**APPENDIX A**

**COMPARISON OF FORMER INSTALLATION RESTORATION PROGRAM  
AND CERCLA TERMINOLOGY**

The SI performed at Plattsburgh AFB originally was assigned within the four-phase IRP structure as the Site Confirmation Study (Phase II, Stage 1). The U.S. Air Force has since revised the terminology of stages within the IRP to correspond directly with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Contingency Plan (NCP). A general comparison of the former IRP and CERCLA terminology follows:

<u>CERCLA</u>	<u>Former IRP</u>
Preliminary Assessment	Phase I Records Search
Site Inspection	Phase II Stage 1 Site Confirmation
Remedial Investigation	Phase II Stage 2 Site Quantification
Feasibility Study	Phase IV(A) Alternative Analysis
Remedial Design	Phase IV(B) Remedial Design
Implementation/Operation	Phase IV(B) Implementation

In the IRP, Phase III was reserved for technology development and testing, which can be likened to treatability studies that may be conducted during the RI/FS process.

**APPENDIX B**  
**SOIL GAS SURVEY RESULTS**

## SS-003 - SOV SURVEY

PILOTISBURGH AFB

DATE: 10/16/87 NUMBER OF PROBES: 5

SAMPLE NUMBER	DEPTH OF PROBE (FT)	HALOGENATED HYDROCARBONS (ng/L)			HYDROCARBONS (ng/L)		
		TCA	TCE	PCE	BENZENE	XYLENE	TOTAL
SP2-1	5	<1	2	2	4	0.19	0.58
SP2-2	5	<1	4	3	7	<0.02	0.09
SP2-3	5	<1	4	4	8	0.08	0.12
SP2-4	5	<1	5	2	7	<0.02	0.2
SP2-4D	5	<1	7	2	9	<0.02	0.08
SP2-5	5	<1	6	<1	6	<0.02	0.36

NOTE: D denotes a duplicate sample.

APPENDIX C

SURFACE WATER AND SOIL SAMPLE RESULTS  
LABORATORY AND FLAGGED DATA TABLES

**LABORATORY DATA TABLES**

ANALYTE	UNITS: ug/L	CRQL	SAMPLE ID: SW-1	SAMPLE LOCATION: JSUSP-2X01	LAB NUMBER: 171315	DATE SAMPLIED: 12/09/89	DATE ANALYZED: 12/14/89
Chloromethane	10	10	10 u	10 u	10 u	10 u	10 u
Bromomethane	10	10	10 u	10 u	10 u	10 u	10 u
Vinyl Chloride	10	10	10 u	10 u	10 u	10 u	10 u
Chloroethane	10	10	5 u	5 u	5 u	5 u	5 u
Methylene Chloride	5	5	10 u	10 u	10 u	10 u	10 u
Acetone	10	5	5 u	5 u	5 u	5 u	5 u
Carbon Disulfide	5	5	5 u	5 u	5 u	5 u	5 u
1,1-Dichloroethene	5	5	5 u	5 u	5 u	5 u	5 u
1,1,1-Trichloroethane	5	5	5 u	5 u	5 u	5 u	5 u
1,1,2-Trichloroethene (total)	5	5	5 u	5 u	5 u	5 u	5 u
Chloroform	5	5	5 u	5 u	5 u	5 u	5 u
1,2-Dichloroethane	5	5	5 u	5 u	5 u	5 u	5 u
2-Butanone	10	10	10 u	10 u	10 u	10 u	10 u
1,1,1-Trichloroethane	5	5	5 u	5 u	5 u	5 u	5 u
Carbon Tetrachloride	5	5	5 u	5 u	5 u	5 u	5 u
Vinyl Acetate	10	10	10 u	10 u	10 u	10 u	10 u
Bromodichloroethane	5	5	5 u	5 u	5 u	5 u	5 u
1,2-Dichloropropane	5	5	5 u	5 u	5 u	5 u	5 u
Cis-1,3-Dichloropropene	5	5	5 u	5 u	5 u	5 u	5 u
Trichloroethene	5	5	5 u	5 u	5 u	5 u	5 u
Dibromochloroethane	5	5	5 u	5 u	5 u	5 u	5 u
1,1,2-Trichloroethane	5	5	5 u	5 u	5 u	5 u	5 u
Benzene	5	5	5 u	5 u	5 u	5 u	5 u
Trans-1,3-Dichloropropene	5	5	5 u	5 u	5 u	5 u	5 u
Bromoform	5	5	5 u	5 u	5 u	5 u	5 u
4-Methyl-2-Pentanone	10	10	10 u	10 u	10 u	10 u	10 u
2-Hexanone	10	10	10 u	10 u	10 u	10 u	10 u
Tetrachloroethene	5	5	5 u	5 u	5 u	5 u	5 u
1,1,2,2-Tetrachloroethane	5	5	5 u	5 u	5 u	5 u	5 u
Toluene	5	5	5 u	5 u	5 u	5 u	5 u
Chlorobenzene	5	5	5 u	5 u	5 u	5 u	5 u
Ethylbenzene	5	5	5 u	5 u	5 u	5 u	5 u
Styrene	5	5	5 u	5 u	5 u	5 u	5 u
Xylene (Total)	5	5	5 u	5 u	5 u	5 u	5 u

Dilution Factor: 1

Associated Method Blank: C8871214C13

## PROJECT: Pittsburgh

## SOIL BORING SAMPLE ANALYSIS - SS-003 (SP-2) Fuel Oil Spill (Building 205)

19-Mar-90

ANALYTE UNITS: ug/kg	CRL	SAMPLE ID: LAB NUMBER: DEPTH (Ft.): DATE SAMPLED: DATE ANALYZED:	SS-112 S2XSS11201 164661 1 11/10/87 11/21/87	SS-112 S2XSS11203 164663 2 11/10/87 11/21/87	SS-1120 S2DSS11203 164667 3 11/10/87 11/21/87	SS-112 S2XSS11204 164940 4 11/10/87 11/25/87	SS-1120 S2DSS11205 164669 5 11/10/87 11/21/87	SS-1120 S2DSS11205 164669 5 11/10/87 11/21/87	SS-1120 S2DSS11205 164669 5 11/10/87 11/21/87
Chloromethane	10	11 U	10 U	11 U	10 U	10 U	12 U	12 U	12 U
Bromomethane	10	11 U	10 U	11 U	10 U	12 U	12 U	12 U	12 U
Vinyl Chloride	10	11 U	10 U	11 U	10 U	12 U	12 U	12 U	12 U
Chloroethane	10	11 U	10 U	11 U	10 U	12 U	12 U	12 U	12 U
Methylene Chloride	5	10	39	16 B	3 Jb	6 B	9-6 B	25 B	29 U
Acetone	5	5 U	5 U	5 U	5 U	5 U	5 U	49 B	29 U
Carbon Disulfide	5	5 U	5 U	5 U	5 U	5 U	5 U	26 B	29 U
1,1-Dichloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	6.2 U	12 U
1,1-Dichloroethane	5	5 U	5 U	5 U	5 U	5 U	5 U	6.2 U	12 U
1,2-Dichloroethene (total)	5	5 U	5 U	5 U	5 U	5 U	5 U	6.2 U	12 U
Chloroform	5	5 U	5 U	5 U	5 U	5 U	5 U	6.2 U	12 U
1,2-Dichloroethane	5	5 U	5 U	5 U	5 U	5 U	5 U	6.2 U	12 U
2-Butanone	10	11 U	10 U	11 U	10 U	12 U	12 U	12 U	12 U
1,1,1-Trichloroethane	5	5 U	5 U	5 U	5 U	5 U	5 U	6.2 U	12 U
Carbon Tetrachloride	5	5 U	5 U	5 U	5 U	5 U	5 U	6.2 U	12 U
Vinyl Acetate	10	11 U	10 U	11 U	10 U	12 U	12 U	12 U	12 U
Bromodichloromethane	5	5 U	5 U	5 U	5 U	5 U	5 U	6.2 U	12 U
1,2-Dichloropropane	5	5 U	5 U	5 U	5 U	5 U	5 U	6.2 U	12 U
Cis-1,3-Dichloropropene	5	5 U	5 U	5 U	5 U	5 U	5 U	6.2 U	12 U
Trichloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	6.2 U	12 U
Dibromoethane	5	5 U	5 U	5 U	5 U	5 U	5 U	6.2 U	12 U
1,1,2-Trichloroethane	5	5 U	5 U	5 U	5 U	5 U	5 U	6.2 U	12 U
Benzene	2	2 U	2 U	2 U	2 U	2 U	2 U	6.2 U	12 U
Trans-1,3-Dichloropropene	5	5 U	5 U	5 U	5 U	5 U	5 U	6.2 U	12 U
Bromoform	5	5 U	5 U	5 U	5 U	5 U	5 U	6.2 U	12 U
4-Methyl-2-Pentanone	10	11 U	10 U	11 U	10 U	12 U	12 U	12 U	12 U
2-Hexanone	10	11 U	10 U	11 U	10 U	12 U	12 U	12 U	12 U
Tetrachloroethene	5	5 U	5 U	5 U	5 U	5 U	5 U	6.2 U	12 U
1,1,2,2-Tetrachloroethane	5	5 U	5 U	5 U	5 U	5 U	5 U	6.2 U	12 U
Toluene	5	5 U	5 U	5 U	5 U	5 U	5 U	6.2 U	12 U
Chlorobenzene	5	5 U	5 U	5 U	5 U	5 U	5 U	6.2 U	12 U
Ethylbenzene	5	5 U	5 U	5 U	5 U	5 U	5 U	6.2 U	12 U
Styrene	5	5 U	5 U	5 U	5 U	5 U	5 U	6.2 U	12 U
Xylene (Total)	5	5 U	5 U	5 U	5 U	5 U	5 U	300	480 E
									610 E
Dilution Factor:			1	1	1	1	1.25	1	1
Percent Solids:			94	97	94	96	79	84	85
Associated Method Blank:	G8871121C13	G8871121C13	G8871121A13	G8871121C10	G8871124B14	G8871121C13	G8871121C13	G8871121B14	G8871121B14

## PROJECT: Plattsburgh

## SOIL BORING SAMPLE ANALYSIS - SS-003 (SP-2) Fuel Oil Spill (Building 205)

19-Mar-90

ANALYTE UNITS: ug/kg	CRQL	SAMPLE ID: LAB NUMBER: DEPTH (ft.): DATE SAMPLED: DATE ANALYZED:	SS-112 S2XSS11206 164689 6 11/10/87 11/21/87	SS-113 S2XSS11301 164694 1 11/10/87 11/21/87	SS-113 S2DSS11302 164713 2 11/10/87 11/21/87	SS-113 S2XSS11303 164759 3 11/10/87 11/21/87	SS-113 S2DSS11304 164763 4 11/10/87 11/21/87	SS-113 S2DSS11305 164766 5 11/10/87 11/21/87
Chloromethane	10	12 U	12 U	12 U	12 U	12 U	12 U	12 U
Bromomethane	10	12 U	12 U	12 U	12 U	12 U	12 U	12 U
Vinyl Chloride	10	12 U	12 U	12 U	12 U	12 U	12 U	12 U
Chloroethane	10	12 U	12 U	12 U	12 U	12 U	12 U	12 U
Methylene Chloride	5	25 B	14 B	14 B	20 B	23 B	17 B	19 B
Acetone	10	68 B	42 B	42 B	42 B	13 B	18 B	20 B
Carbon Disulfide	5	6 U	6 U	6 U	6 U	7 U	6 U	7 U
1,1-Dichloroethene	5	6 U	6 U	6 U	6 U	7 U	6 U	6 U
1,1,1-Dichloroethane	5	6 U	6 U	6 U	6 U	6 U	6 U	6 U
1,1,2-Dichloroethene (total)	5	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Chloroform	5	6 U	6 U	6 U	6 U	6 U	6 U	6 U
1,2-Dichloroethane	5	6 U	6 U	6 U	6 U	7 U	6 U	6 U
2-Butanone	10	12 U	27	12 U	12 U	13 U	12 U	12 U
1,1,1-Trichloroethane	5	6 U	6 U	6 U	6 U	7 U	6 U	6 U
Carbon Tetrachloride	5	6 U	6 U	6 U	6 U	7 U	6 U	6 U
Vinyl Acetate	10	12 U	12 U	12 U	12 U	13 U	12 U	12 U
Bromodichloromethane	5	6 U	6 U	6 U	6 U	7 U	6 U	6 U
1,2-Dichloropropane	5	6 U	6 U	6 U	6 U	7 U	6 U	6 U
Cis-1,3-Dichloropropene	5	6 U	6 U	6 U	6 U	7 U	6 U	6 U
Trichloroethene	5	6 U	6 U	6 U	6 U	7 U	6 U	6 U
Dibromochloromethane	5	6 U	6 U	6 U	6 U	7 U	6 U	6 U
1,1,2-Trichloroethane	5	6 U	6 U	6 U	6 U	7 U	6 U	6 U
Benzene	5	6 U	6 U	6 U	6 U	7 U	6 U	6 U
Trans-1,3-Dichloropropene	5	6 U	6 U	6 U	6 U	7 U	6 U	6 U
Bromoform	5	6 U	6 U	6 U	6 U	7 U	6 U	6 U
4-Methyl-2-Pentanone	10	12 U	12 U	12 U	12 U	13 U	12 U	12 U
2-Hexanone	10	6 U	6 U	6 U	6 U	7 U	6 U	6 U
Tetrachloroethene	5	6 U	6 U	6 U	6 U	7 U	6 U	6 U
1,1,2,2-Tetrachloroethane	5	6 U	6 U	6 U	6 U	7 U	6 U	6 U
Toluene	5	6 U	6 U	6 U	6 U	7 U	6 U	6 U
Chlorobenzene	5	6 U	6 U	6 U	6 U	7 U	6 U	6 U
Ethylbenzene	5	6 U	6 U	6 U	6 U	7 U	6 U	6 U
Styrene	5	6 U	6 U	6 U	6 U	7 U	6 U	6 U
Xylene (Total)	5	6 U	6 U	6 U	6 U	7 U	6 U	6 U

Dilution Factor: Percent Solids:	1	1	1	1	1	1	1	1
Associated Method Blank:	GC871121C14	GC871120A14	GC871121C14	GC871121C10	GB871121C10	GB871121C10	GB871121C10	GB871121C10

1

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ANALYTE	UNITS: ug/kg	CRQL
Chloroethane	10	13 U
Bromomethane	10	13 U
Vinyl Chloride	10	13 U
Chloroethane	10	13 U
Methylene Chloride	5	19 B
Acetone	10	23 B
Carbon Disulfide	5	6 U
1,1-Dichloroethene	5	6 U
1,1-Dichloroethane	5	6 U
1,2-Dichloroethene (total)	5	6 C
Chloroform	5	6 C
1,2-Dichloroethane	5	6 C
2-Butanone	10	13 U
1,1,1-Trichloroethane	5	6 C
Carbon Tetrachloride	5	6 C
Vinyl Acetate	10	13 U
Bromodichloromethane	5	6 C
1,2-Dichloropropane	5	6 C
Cis-1,3-Dichloropropene	5	6 C
Trichloroethene	5	6 C
Dibromochloromethane	5	6 C
1,1,2-Trichloroethane	5	6 C
Benzene	5	6 C
Trans-1,3-Dichloropropene	5	6 C
Bromoform	5	6 C
4-Methyl-2-Pentanone	10	13 U
2-Hexanone	10	13 U
Tetrachloroethene	5	6 C
1,1,2,2-Tetrachloroethane	5	6 C
Toluene	5	6 C
Chlorobenzene	5	6 C
Ethylbenzene	5	6 C
Styrene	5	6 C
Xylene (Total)	5	6 C

ANALYTE	UNITS: ug/kg	CRQL
Phenol		
bis(2-Chloroethyl)ether	330	2100 U
2-Chlorophenol	330	2100 U
1,3-Dichlorobenzene	330	2100 U
1,4-Dichlorobenzene	330	2100 U
Benzyl alcohol	330	2100 U
1,2-Dichlorobenzene	330	2100 U
2-Methylphenol	330	2100 U
bis(2-Chloroisopropyl)ether	330	2100 U
4-Methylphenol	330	2100 U
N-Nitroso-di-n-propylamine	330	2100 U
Hexachloro	330	2100 U
Nitrobenzene	330	2100 U
Isophorone	330	2100 U
2-Nitrophenol	330	2100 U
2,4-Dimethylphenol	330	2100 U
Benzoic acid	1600	10000 U
bis(2-Chloroethoxy)methane	330	2100 U
2,4-Dichlorophenol	330	2100 U
1,2,4-Trichlorobenzene	330	2100 U
Naphthalene	330	2100 U
4-Chloronaniline	330	2100 U
Hexachlorobutadiene	330	2100 U
4-Chloro-3-Methylphenol	330	2100 U
2-Methylnaphthalene	330	18000 U
Hexachlorocyclooctadiene	330	2100 U
2,4,6-Trichlorophenol	330	2100 U
2,4,5-Trichlorophenol	1600	10000 U
2-Chloronaphthalene	330	2100 U
2-Nitronaniline	1600	10000 U
Dimethyl phthalate	330	2100 U
Acenaphthylene	330	2100 U
2,6-Dinitrotoluene	330	2100 U

ANALYTE	UNITS: ug/kg	CRRL	
3-Nitroaniline	1600	10000	U
Acenaphthene	330	2100	U
2,4-Dinitrophenol	1600	10000	U
4-Nitrophenol	1600	10000	U
Dibenzofuran	330	2100	U
2,4-Dinitrotoluene	330	2100	U
Diethyl phthalate	330	2100	U
4-Chlorophenyl - phenylether	330	2100	U
Fluorene	330	2100	U
4-Nitroaniline	1600	10000	U
4,6-Dinitro-2-methylphenol	1600	10000	U
N-Nitrosodiphenylamine	330	2100	U
4-Bromophenyl - phenylether	330	2100	U
Hexachlorobenzene	330	2100	U
Pentachlorophenol	1600	10000	U
Phenanthrene	330	8000	U
Anthracene	330	2100	U
Di-n-butylphthalate	330	2100	U
Fluoranthene	330	2100	U
Pyrene	330	1400	J
Butylbenzyl phthalate	330	800	J
3,3'-Dichlorobenzidine	660	4200	U
Benz(a)Anthracene	330	2100	U
Chrysene	330	2100	U
bis(2-Ethylhexyl)phthalate	330	2100	U
Di-n-octylphthalate	330	2100	U
Benz(b)Fluoranthene	330	2100	U
Benz(k)Fluoranthene	330	2100	U
Benz(a)Pyrene	330	2100	U
Indeno(1,2,3-cd)pyrene	330	2100	U
Dibenz(a,h)anthracene	330	2100	U
Benz(g,h,i,)perylene	330	2100	U

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Dilution Factor: 6.3  
Percent Solids: 79

Associated Method Blank: GH066636A16

PROJECT: Plattsburgh

SOIL BORING SAMPLE ANALYSIS - SS-003 (SP-2) Fuel Oil Spill (Building 205)

19-Mar-90

SAMPLE ID:	SS-112	SS-112	SS-112	SS-112	SS-112	SS-113
SAMPLE LOCATION:	S2XSS11201	S2XSS11202	S2XSS11203	S2XSS11205	S2XSS11206	S2XSS11301
LAB NUMBER:	164662	164664	164666	164672	164692	164704
DEPTH (ft.):	1	2	3	5	6	1
DATE SAMPLED:	11/10/87	11/10/87	11/10/87	11/10/87	11/10/87	11/10/87
DATE ANALYZED:	11/25/87	11/25/87	11/25/87	11/25/87	12/31/87	11/25/87

ANALYTE  
UNITS: mg/kg

D.L.

Total Petroleum Hydrocarbons	25	25 U	25 U	82	6900	160	25	33	25 U	25 U
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PROJECT: Plattsburgh

SOIL BORING SAMPLE ANALYSIS - SS-003 (SP-2) Fuel Oil Spill (Building 205)

19-Mar-90

SAMPLE ID:	SS-113	SS-113	SS-113
SAMPLE LOCATION:	S2XSS11304	S2XSS11305	S2XSS11306
LAB NUMBER:	164765	164768	164771
DEPTH (ft.):	4	5	6
DATE SAMPLED:	11/10/87	11/10/87	11/10/87
DATE ANALYZED:	11/25/87	11/25/87	11/25/87

ANALYTE  
UNITS: mg/kg

Total Petroleum Hydrocarbons	25	25 U	25 U	25 U
------------------------------	----	------	------	------

DL

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PROJECT: Plattsburgh

SURFACE WATER SAMPLE ANALYSIS - SS-003 (SP-2) Fuel Oil Spill (Building 205)

19-Mar-90

SAMPLE ID: SW-1  
SAMPLE LOCATION: JNHSP-2001  
LAB NUMBER: 171297  
DATE SAMPLED: 12/09/87  
DATE ANALYZED: 12/17/87

ANALYTE  
UNITS: mg/L

Total Petroleum Hydrocarbons 1 1 u

**FLAGGED DATA TABLES**

ANALYTE	UNITS: ug/L	CRL	
Chloromethane			
Bromomethane	10	10 U	
Vinyl Chloride	10	10 U	
Chloroethane	10	10 U	
Methylene Chloride	5	5 U	
Acetone	10	10 U	
Carbon Disulfide	5	5 U	
1,1-Dichloroethene	5	5 U	
1,1-Dichloroethane	5	5 U	
1,2-Dichloroethene (total)	5	5 U	
Chloroform	5	5 U	
1,2-Dichloroethane	5	5 U	
2-Butanone	10	10 UR	
1,1,1-Trichloroethane	5	5 U	
Carbon Tetrachloride	5	5 U	
Vinyl Acetate	10	10 U	
Bromodichloromethane	5	5 U	
1,2-Dichloropropane	5	5 U	
Cis-1,3-Dichloropropene	5	5 U	
Trichloroethene	5	5 U	
Dibromochloromethane	5	5 U	
1,1,2-Trichloroethane	5	5 U	
Benzene	5	5 U	
Trans-1,3-Dichloropropene	5	5 U	
Bromoform	5	5 U	
4-Methyl-2-Pentanone	10	10 U	
2-Hexanone	10	10 U	
Tetrachloroethene	5	5 U	
1,1,2,2-Tetrachloroethane	5	5 U	
Toluene	5	5 U	
Chlorobenzene	5	5 U	
Ethylbenzene	5	5 U	
Styrene	5	5 U	
Xylene (Total)	5	5 U	

Dilution Factor: 1

Associated Method Blank: CBB71214C13

## PROJECT: Plattsburgh

## SOIL BORING SAMPLE ANALYSIS - SS-003 (SP-2) Fuel Oil Spill (Building 205)

19-Mar-90

SAMPLE ID:	SS-112	SS-112	SS-112	SS-112	SS-112	SS-112	SS-112
SAMPLE LOCATION:	S2XSS11201	S2XSS11202	S2XSS11203	S2XSS11204	S2DSS11204	S2DSS11205	S2DSS11205
LAB NUMBER:	164661	164663	164665	164940	164668	164669	164685
DEPTH (ft.):	1	2	3	4	5	5	5
DATE SAMPLED:	11/10/87	11/10/87	11/10/87	11/10/87	11/10/87	11/10/87	11/10/87
DATE ANALYZED:	11/21/87	11/21/87	11/21/87	11/21/87	11/21/87	11/21/87	11/21/87
ANALYTE	UNITS: ug/kg	CRQL					
Chloromethane	10	11 U	10 U	10 U	12 U	12 U	12 U
Bromomethane	10	11 U	10 U	10 U	12 U	12 U	12 U
Vinyl Chloride	10	11 U	10 U	10 U	12 U	12 U	12 U
Chloroethane	10	11 U	10 U	10 U	12 U	12 U	12 U
Methylene Chloride	5	10 U	6 U	5 U	9.6 U	10 U	12 U
Acetone	10	39 UJ	16 UJ	49 UJ	26 J	29 UJ	38 UJ
Carbon Disulfide	5	5 U	5 U	5 U	6.2 U	15 U	6 U
1,1-Dichloroethene	5	5 U	5 U	5 U	6.2 U	15 U	6 U
1,1-Dichloroethane	5	5 U	5 U	5 U	6.2 U	15 U	6 U
1,2-Dichloroethene (total)	5	5 U	5 U	5 U	6.2 U	15 U	6 U
Chloroform	5	5 U	5 U	5 U	6.2 U	15 U	6 U
1,2-Dichloroethane	5	5 U	5 U	5 U	6.2 U	15 U	6 U
2-Gutanone	10	11 UR	10 UR	11 UR	10 UR	12 UR	12 UR
1,1,1-Trichloroethane	5	5 U	5 U	5 U	6.2 U	15 U	6 U
Carbon Tetrachloride	5	5 U	5 U	5 U	6.2 U	15 U	6 U
Vinyl Acetate	10	11 U	10 U	11 U	10 U	12 U	12 U
Bromodichloromethane	5	5 U	5 U	5 U	6.2 U	15 U	6 U
1,2-Dichloropropane	5	5 U	5 U	5 U	6.2 U	15 U	6 U
Cis-1,3-Dichloropropene	5	5 U	5 U	5 U	6.2 U	15 U	6 U
Trichloroethene	5	5 U	5 U	5 U	6.2 U	15 U	6 U
Dibromochloromethane	5	5 U	5 U	5 U	6.2 U	15 U	6 U
1,1,2-Trichloroethane	5	5 U	5 U	5 U	6.2 U	15 U	6 U
Benzene	5	2 UJ	5 U	5 U	6.2 U	15 U	6 U
Trans-1,3-Dichloropropene	5	5 U	5 U	5 U	6.2 U	15 U	6 U
Bromoform	5	5 U	5 U	5 U	6.2 U	15 U	6 U
4-Methyl-2-Pentanone	10	11 U	10 U	11 U	10 U	12 U	12 U
2-Hexanone	10	11 U	10 U	11 U	12 U	12 U	12 U
Tetrachloroethene	5	5 U	5 U	5 U	6.2 U	15 U	6 U
1,1,2-Tetrachloroethane	5	5 U	5 U	5 U	6.2 U	15 U	6 U
Toluene	5	5 U	5 U	5 U	6.2 U	15 U	6 U
Chlorobenzene	5	5 U	5 U	5 U	6.2 U	15 U	6 U
Ethylbenzene	5	5 U	5 U	5 U	6.2 U	15 U	6 U
Styrene	5	5 U	5 U	5 U	6.2 U	15 U	6 U
Xylylene (Total)	5	5 U	5 U	5 U	300	470 J	610 EJ
Dilution Factor:	1	1	1	1	1	2.5	1
Percent Solids:	94	97	94	96	79	84	85
Associated Method Blank:	G8871121C13	G8871121C13	G8871121A13	GH066315C10	GD871124B14	G8871121C13	GC871121B14

SAMPLE ID:	SS-112	SS-113	SS-113	SS-113								
SAMPLE LOCATION:	S2XSS11206	S2XSS11301	S2XSS11302	S2XSS11303	S2XSS11304	S2XSS11305	S2XSS11306	S2XSS11307	S2XSS11308	S2XSS11309	S2XSS11310	S2XSS11311
LAB NUMBER:	164689	164694	164713	164742	164759	164763	164766	164767	164770	164773	164776	164779
DEPTH (ft.):	6	1	2	3	4	4	4	5	4	4	4	5
DATE ANALYZED:	11/10/87	11/10/87	11/10/87	11/10/87	11/10/87	11/10/87	11/10/87	11/10/87	11/10/87	11/10/87	11/10/87	11/10/87
DATE SAMPLED:	11/21/87	11/21/87	11/21/87	11/21/87	11/21/87	11/21/87	11/21/87	11/21/87	11/21/87	11/21/87	11/21/87	11/21/87
ANALYTE	UNITS: ug/kg	CRL										
Chloromethane	10	12 U	12 U	12 U								
Bromoethane	10	12 U	12 U	12 U								
Vinyl Chloride	10	12 U	12 U	12 U								
Chloroethane	10	12 U	12 U	12 U								
Methylene Chloride	5	25 U	14 U	14 U	20 U	21 U	17 U	17 U	17 U	17 U	17 U	17 U
Acetone	10	68 UJ	14 UJ	42 UJ	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Carbon Disulfide	5	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
1,1-Dichloroethene	5	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
1,1-Dichloroethane	5	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
1,2-Dichloroethene (total)	5	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Chloroform	5	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
1,2-Dichloroethane	5	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
2-Butanone	10	12 UR	12 UR	27 J	12 UR	12 UR	13 UR	13 UR	12 UR	12 UR	12 UR	12 UR
1,1,1-Trichloroethane	5	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Carbon Tetrachloride	5	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Vinyl Acetate	10	12 U	12 U	12 U								
Bromodichloromethane	5	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
1,2-Dichloropropane	5	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Cis-1,3-Dichloropropene	5	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Trichloroethene	5	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Dibromochloromethane	5	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
1,1,2-Trichloroethane	5	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Benzene	5	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Trans-1,3-Dichloropropene	5	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Bromoform	5	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
4-Methyl-2-Pentanone	10	12 U	12 U	12 U								
2-Hexanone	10	12 U	12 U	12 U								
Tetrachloroethene	5	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
1,1,2,2-Tetrachloroethane	5	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Toluene	5	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Chlorobenzene	5	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Ethylbenzene	5	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Styrene	5	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Xylene (Total)	5	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U

Dilution Factor:  
Percent Solids:

Associated Method Blank: GC871121C14

GC871121C14

GB871121C10

GB871121C10

GB871121C10

GB871121C10

GB871121C10

GB871121C10

ANALYTE UNITS: ug/kg	CRQL	SAMPLE ID: S20SS11305 LAB NUMBER: 164769	DEPTH (ft.): 5	DATE SAMPLED: 11/10/89	DATE ANALYZED: 11/21/87	SS-1130 S2XSS11306 164770	11/10/87 11/21/87
Chloromethane	10	13 U	13 U	13 U	13 U	13 U	13 U
Bromoform	10	13 U	13 U	13 U	13 U	13 U	13 U
Vinyl Chloride	10	13 U	13 U	13 U	13 U	13 U	13 U
Chloroethane	10	13 U	13 U	13 U	13 U	13 U	13 U
Methylene Chloride	5	19 U	22 U	22 U	22 U	26 U	26 U
Acetone	10	23 U	26 U	26 U	26 U	27 U	27 U
Carbon Disulfide	5	6 U	6 U	6 U	6 U	7 U	7 U
1,1-Dichloroethene	5	6 U	6 U	6 U	6 U	7 U	7 U
1,1-Dichloroethane	5	6 U	6 U	6 U	6 U	7 U	7 U
1,2-Dichloroethene (total)	5	6 U	6 U	6 U	6 U	7 U	7 U
Chloroform	5	6 U	6 U	6 U	6 U	7 U	7 U
1,2-Dichloroethane	5	6 U	6 U	6 U	6 U	7 U	7 U
2-Butanone	10	13 UR	13 UR	13 UR	13 UR	13 UR	13 UR
1,1,1-Trichloroethane	5	6 U	6 U	6 U	6 U	7 U	7 U
Carbon Tetrachloride	5	6 U	6 U	6 U	6 U	7 U	7 U
Vinyl Acetate	10	13 U	13 U	13 U	13 U	13 U	13 U
Bromodichloromethane	5	6 U	6 U	6 U	6 U	7 U	7 U
1,2-Dichloropropane	5	6 U	6 U	6 U	6 U	7 U	7 U
Cis-1,3-Dichloropropene	5	6 U	6 U	6 U	6 U	7 U	7 U
Trichloroethene	5	6 U	6 U	6 U	6 U	7 U	7 U
Dibromochloromethane	5	6 U	6 U	6 U	6 U	7 U	7 U
1,1,2-Trichloroethane	5	6 U	6 U	6 U	6 U	7 U	7 U
Benzene	5	6 U	6 U	6 U	6 U	7 U	7 U
Trans-1,3-Dichloropropene	5	6 U	6 U	6 U	6 U	7 U	7 U
Bromoform	5	6 U	6 U	6 U	6 U	7 U	7 U
4-Methyl-2-Pentanone	10	13 U	13 U	13 U	13 U	13 U	13 U
2-Hexanone	10	13 U	13 U	13 U	13 U	13 U	13 U
Tetrachloroethene	5	6 U	6 U	6 U	6 U	7 U	7 U
1,1,2,2-Tetrachloroethane	5	6 U	6 U	6 U	6 U	7 U	7 U
Toluene	5	6 U	6 U	6 U	6 U	7 U	7 U
Chlorobenzene	5	6 U	6 U	6 U	6 U	7 U	7 U
Ethylbenzene	5	6 U	6 U	6 U	6 U	7 U	7 U
Styrene	5	6 U	6 U	6 U	6 U	7 U	7 U
Xylene (Total)	5	6 U	6 U	6 U	6 U	7 U	7 U

Dilution Factor: 1 1  
Percent Solids: 77 75

Associated Method Blank: GB871121C10

GB871121C10

ANALYTE	UNITS: ug/kg	CRQL
Phenol	330	2100 UJ
bis(2-Chloroethyl)ether	330	2100 UJ
2-Chlorophenol	330	2100 UJ
1,3-Dichlorobenzene	330	2100 UJ
1,4-Dichlorobenzene	330	2100 UJ
Benzyl alcohol	330	2100 UJ
1,2-Dichlorobenzene	330	2100 UJ
2-Methylphenol	330	2100 UJ
bis(2-Chloroisopropyl)ether	330	2100 UJ
4-Methylphenol	330	2100 UJ
N-Nitroso-di-n-propylamine	330	2100 UJ
Hexachloro	330	2100 UJ
Nitrobenzene	330	2100 UJ
Isophorone	330	2100 UJ
2-Nitrophenol	330	2100 UJ
2,4-Dimethylphenol	330	2100 UJ
Benzoic acid	1600	10000 UJ
bis(2-Chlorooethoxy)methane	330	2100 UJ
2,4-Dichlorophenol	330	2100 UJ
1,2,4,7-Tetrachlorobenzene	330	2100 UJ
Naphthalene	330	2100 UJ
4-Chloronitline	330	2100 UJ
Hexachlorobutadiene	330	2100 UJ
4-Chloro-3-Methylphenol	330	2100 UJ
2-Methylnaphthalene	330	18000 J
Hexachlorocyclopentadiene	330	2100 UJ
2,4,6-Trichloropheno	330	2100 UJ
2,4,5-Trichloropheno	1600	10000 UJ
2-Chloronaphthalene	330	2100 UJ
2-Nitroaniline	1600	10000 UJ
Dimethylphthalate	330	2100 UJ
Acenaphthylene	330	2100 UJ
2,6-Dinitrotoluene	330	2100 UJ

ANALYTE	UNITS: ug/kg	CRQL	
3-Nitroaniline	1600	10000	
Acenaphthene	330	2100	UJ
2,4-Dinitrophenol	1600	10000	UJ
4-Nitrophenol	1600	10000	UJ
Dibenzofuran	330	2100	UJ
2,4-Dinitrotoluene	330	2100	UJ
Diethyl phthalate	330	2100	UJ
4-Chlorophenyl-phenyl ether	330	2100	UJ
Fluorene	330	2100	UJ
4-Nitroaniline	1600	10000	UJ
4,6-Dinitro-2-methylphenol	1600	10000	UJ
N-Nitrosodiphenylamine	330	2100	UJ
4-Bromophenyl-phenyl ether	330	2100	UJ
Hexachlorobenzene	330	2100	UJ
Pentachlorophenol	1600	10000	UJ
Phenanthrene	330	8000	J
Anthracene	330	2100	UJ
Di-n-butylphthalate	330	2100	UJ
Fluoranthene	330	2100	UJ
Pyrene	330	1400	J
Butylbenzylphthalate	330	800	J
3,3'-Dichlorobenzidine	660	4200	UJ
Benz(a)Anthracene	330	2100	UJ
Chrysene	330	2100	UJ
bis(2-Ethylhexyl)phthalate	330	2100	UJ
Di-n-octylphthalate	330	2100	UJ
Benz(b)Fluoranthene	330	2100	UJ
Benz(k)Fluoranthene	330	2100	UJ
Benz(a)Pyrene	330	2100	UJ
Indeno(1,2,3-cd)pyrene	330	2100	UJ
Dibenz(a,h)anthracene	330	2100	UJ
Benzo(g,h,i)perylene	330	2100	UJ

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 Dilution Factor: 5.0  
 Percent Solids: 79

Associated Method Blank: GH066636A16

